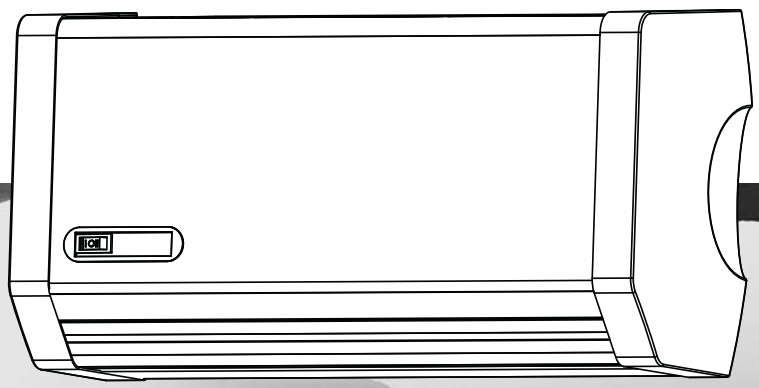
MYSON

Installation, Operating, Maintenance
and After Sales Manual.

HI-LINE LV Fan Convector
Model: 7-4



heatingthrough**innovation.**

Product Serial Number:

Please leave this manual with the end user.

Part Number: 1370058
Issue 3

CE

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1.0 General Information

- This HI-LINE LV fan convector is designed for wall-mounted installation with a maximum installation height of 2.13m to the underside of the unit and a minimum clearance between the top of the unit and the ceiling of 50mm.
- The minimum installation height to the underside of the unit is 1.8m.
- The minimum side clearance is 100mm.
- The HI-LINE LV should only be used on closed circulation, two pipe, pump assisted central heating systems.
- Before proceeding with the installation, the heating system design must be considered and the unit correctly sized to meet the heat loss requirements of the room at normal fan speed.
- This unit is supplied with a fan speed selector switch giving two fan speed options and off.
- This unit is fitted with a 12V transformer that enables the unit to be fitted in a bathroom. The unit **must** be positioned in accordance with local or national wiring regulations.
- This HI-LINE LV unit can be controlled by the addition of a remote room thermostat. In bathroom installations this **must** be connected to the low voltage circuit, and positioned in accordance with local or national wiring regulations.
- This unit should not be installed in locations with ceiling heights greater than 3m.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

2.0 Heating System Design

This fan convector must be fitted on a two pipe, pumped circulation heating system.

For optimum fan convector heating performance the system must be capable of providing sufficient hot water through the heat exchanger. This means that:

1. The minimum pipe size from boiler to fan convector must be at least 15mm.
2. **This unit is not suitable for use on microbore pipe-work.**
3. Where the unit is fitted on to a system with other emitters a separate circuit for the fan convector should be considered to provide adequate water flow.
4. The system water must be above 43°C for heating mode.
5. **This unit is NOT suitable for one-pipe systems.**
6. **Optimum performance will require effective balancing of the whole system.**
7. This unit should **NOT** be used to replace a radiator in an existing system unless an adequate flow of water can be guaranteed.

3.0 Unit Selection/Sizing

Heat output performance is given in the Technical Data section of this manual. This unit has two fan speed options, however, it is important to size the unit to match the calculated heat loss requirements of the room with the unit operating on the low fan speed. The higher fan speed can then be used for more rapid heating from cold in extreme conditions.

4.0 Location

- This HI-LINE LV unit may be fitted to any convenient wall at a height from floor level that suits the application, providing an unimpeded flow of warm air into the area to be heated.
- The maximum distance from the underside of the unit to floor level is 2.13m.
- The minimum installation height to the underside of the unit is 1.8m.
- This unit should not be installed in locations with ceiling heights greater than 3m.
- The unit should be mounted on a flat wall, and stud or partition walls should be avoided to minimize the possibility of noise transmission.
- This unit may be fitted in zone 2 or the outside zones of a bathroom, in accordance with local or national wiring regulations (see fig 1).

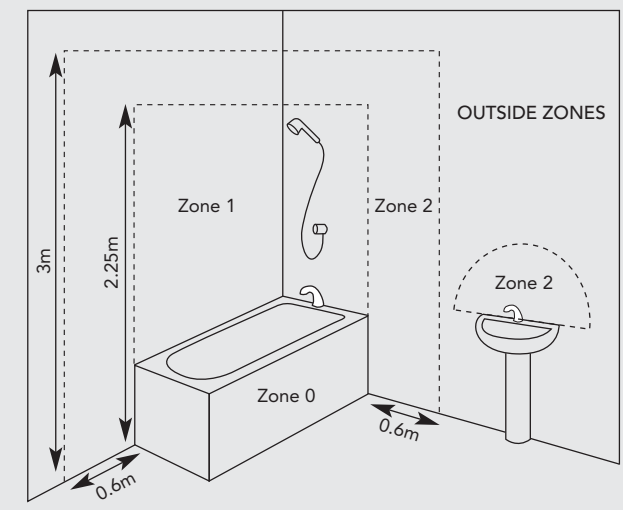

Fig. 1

5.0 Preparation

Before proceeding with the installation, unpack the carton contents and check against the checklist below:

1. HI-LINE LV unit.
2. 15mm isolating valves (1 pair).
3. Instruction manual.
4. Warranty card.
5. Fixing kit (rubber mounts, cable gland and equipotential bond pipe clamp).
6. Transformer.

6.0 Fixing

- Using the fixing dimensions below (see fig. 2), mark the fixing hole positions on the wall.
- Drill and plug the wall for No. 8 x 40mm round head wood screws ensuring that the wall plugs are suitable for the wall type.
- Remove the backing from the self-adhesive washers and place on screws with adhesive side towards the point.
- Tighten the screws into the wall leaving about 9mm projecting.
- Press adhesive washers to the wall.

Remove the outer casing as follows:

- Remove the 2 screws from the underside of the unit (see fig. 2).
- Lift off the outer case.
- Fit chassis on to mounting screws and tighten.

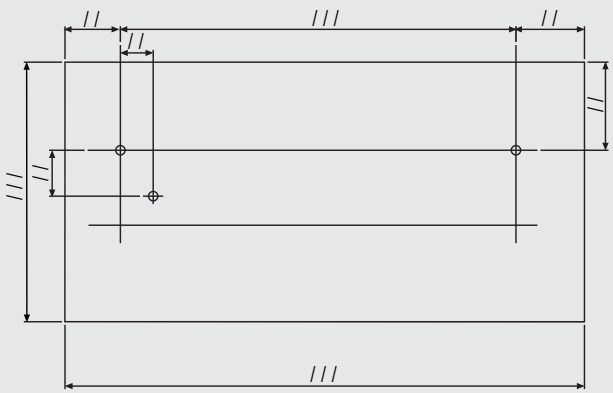

Fig. 2

Note: Before proceeding with pipe-work connections check that the unit is level. If the right hand end is lower than the left then the ability to vent the unit may be restricted.

When water connections and electrical connections have been completed and the unit has been vented, fit the outer cover and secure with fixing screws.

7.0 Water Connections

- Connect unit to system flow and return pipes using the two 15mm isolating valves (see fig. 3).
- Ensure system is flushed in accordance with recognized best practice and a suitable inhibitor is added to the system as necessary.
- Open valves fully, check pipe connections for leaks and vent the heat exchanger - see Commissioning Procedure.

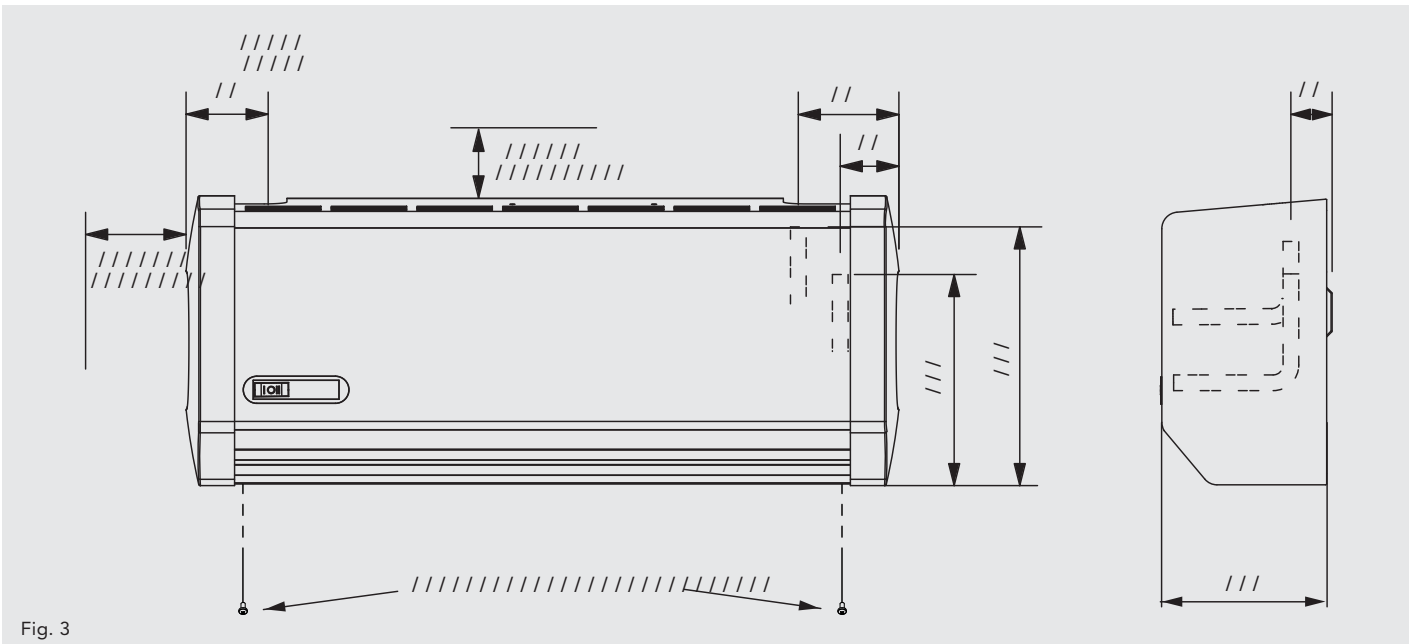

Fig. 3

8.0 Electrical Connection

WARNING: The electrical installation must comply with local or national wiring regulations.

- This unit is supplied with a 2m long mains cord.
- A fused electrical spur with a maximum 3A fuse and a switch having 3mm separation on all poles must be provided in an easily accessible position. The fused spur must not be positioned in a bathroom or other similar high humidity installations.
- For bathroom installations this unit must be connected to an equipotential bond using the pipe clamp provided in the accessories pack. Attach clamp to 15mm flow or return pipework inside the unit and attach earth conductor.

Room Thermostat - if a remote room thermostat is required to control the fan convector, remove the link between T1 and T2 on the terminal block and connect a suitable bimetallic thermostat, capable of operating at low voltages, across these two terminals. The thermostat cable entry is through the hole in the chassis. A cable gland must be used.

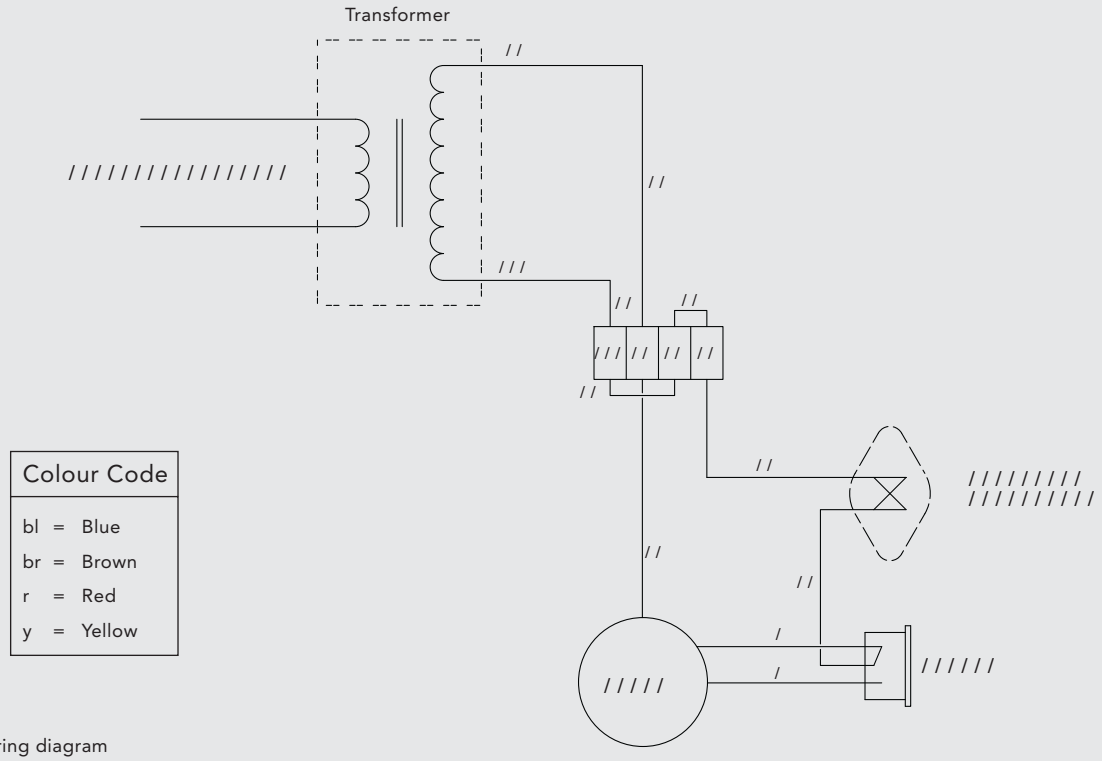

Fig. 4 Wiring diagram

9.0 Commissioning Procedure

- Fill and vent the system.
- Open both valves fully and check for leaks at pipe connections.
- Refit the outer case and secure using the 2 fixing screws.
- Switch on electrical supply.
- Check the operation of the unit by following the operating instructions.
- When installation and commissioning are complete, hand over instruction manual to end-user.

10.0 Technical Data

Heating Performance Data

Model	Fan Speed	Temperature Difference (°C)									
		Heat Output (watts)					Heat Output (Btu/h)				
		20°	30°	40°	50°	60°	20°	30°	40°	50°	60°
7-4	Normal	352	541	734	930	1128	1201	1846	2504	3173	3849
	Boost	645	991	1344	1702	2065	2201	3381	4586	5807	7046

Heat outputs tested in accordance with BS 4856 Part 1.
Flow rate 340 ltr/h (75 gal/h).

Flow Rate Correction Factors:
455 ltr/h (100 gal/h) multiply by 1.06.
227 ltr/h (50 gal/h) multiply by 0.96.
113 ltr/h (25 gal/h) multiply by 0.85.

Noise Levels

Fan Speed	Sound Pressures at 2.5m (dBA)
Normal	16.6
Boost	32.5

Noise levels tested in accordance with EN 23741.

Approximate Hydraulic Resistance through Fan Convectors

Litres/h	mm wg	kPa
455	1084	9.4
340	798	7.7
227	350	3.5
113	134	1.4

Weight, Water Content and Motor Power

Motor Power (W)	Water Content (l)	Unpacked Weight (kg)
30	0.3	7.4

Test Pressure 20bar (2MPa)
Maximum Working Pressure 10bar (IMPa)
Water connections 15mm
Electrical supply to transformer 230V - 50Hz

11.0 Operating Instructions

The HI-LINE LV is fitted with a fan speed and off selector switch.

Ensure that the electrical supply is switched on.

Heating will only be provided when the central heating boiler is on, the pump is running and the system water temperature is greater than 43°C. Ensure boiler is on, and set timer, boiler controls and room thermostats as necessary.

Turn remote room thermostat (if fitted) to a high setting.
Set fan speed control to position I.

The unit will now run on low fan speed.

The low speed setting is recommended for normal operation with the high speed for boost heating (position II) when required.

Low Limit Operation

A low limit thermostat fitted to the HI-LINE LV will ensure that the fan stops after the heating system is switched off and the water flow stops. If left in an operating position the unit will automatically restart when the heating system is reheated.

Off Position

Set the fan speed selector switch to the off (O) position.

12.0 Troubleshooting

Once installed this fan convector becomes part of a complete heating system that will generally include a boiler, pump, other emitters such as radiators and fan convectors, and a number of heating controls, dependent on system complexity. An apparent problem with this unit may be the result of system controls being incorrectly set and can be solved easily without calling out your installer or MYSON Service. Before calling your installer or MYSON Service, please carry out the checks listed opposite.

Note: If you call out MYSON Service to a fault detailed opposite, or to repair a fault caused by incorrect use, a call out charge will be made.

12.0 Troubleshooting (continued...)

Problem	Possible Causes	Remedy
Heating Mode - No Fan	Unit switched off	Turn on
	Temperature set point reached	Turn up room thermostat (if fitted)
	Unit not switched on at fused spur	Switch on at spur
	Fuse blown at fused spur	Replace fuse
	Unit isolating valves shut	Open valves
	Water temperature reaching fan convector below 43°C	Check boiler - Programmer ON Boiler ON and set to high with central heating pump running
Heating Mode poor heating performance and/or unit cycles on low limit thermostat	Low water temperature to unit	Turn up boiler thermostat
	Poor water flow	Vent air from heating system

If the fan convector is still faulty after checking the above, call your installer or MYSON Service.

Common Installation Faults

For optimum performance, this unit must be correctly sized to match the heat loss requirements of the space it is required to heat, and the heating system must be correctly designed to provide adequate flow of hot water to the unit (refer to section 2). If the recommendations in section 2 are not followed, problems may arise as detailed below.

Problem	Possible Causes
Poor heating performance	Unit incorrectly sized for heat loss of room
Heating Mode poor heating performance and/or unit cycles on low limit thermostat	Boiler thermostat set too low
	Lack of flow to fan convector -
	Pump set on low setting
	Isolating valves not fully open
	System incorrectly balanced with unit starved of hot water flow
	Pipe sizing to unit too small

13.0 Maintenance

Before undertaking any maintenance activity isolate the electrical supply.

Maintenance should be restricted to occasional removal of dust and lint around the unit. The outer surface may be wiped over with warm water and mild detergent taking care to avoid water entering the grille areas.

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Spare parts and technical help on all Convector products are available from MYSON Service.

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